

In the Claims

Claims 1-63 are canceled.

64. [Currently Amended] A wafer processing apparatus comprising:  
a wafer holder adapted to receive a wafer having an electrical coupling, the wafer holder including an electrical coupling configured to electrically couple with the electrical coupling of the wafer and communicate signals between the wafer and the wafer holder of the wafer processing apparatus ~~for during fabrication of integrated circuitry of the wafer~~ using the wafer processing apparatus.

65. [Previously Presented] The wafer processing apparatus according to claim 64 further comprising a data gathering device coupled with the electrical coupling of the wafer holder and configured to receive the signals.

66. [Previously Presented] The wafer processing apparatus according to claim 65 further comprising a contact plate configured to communicate the signal intermediate the wafer holder and the data gathering device.

67. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer holder includes a first surface, a second surface, and an electrical interconnect configured to electrically couple the first surface and the second surface.

68. [Previously Presented] The wafer processing apparatus according to claim 67 wherein the first surface of the wafer holder is configured to face a received wafer and the second surface is configured to face a chuck.

69. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer holder includes a plurality of electrical couplings adapted to couple with a plurality of electrical couplings of the wafer.

70. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer holder comprises a chuck.

71. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer holder comprises a chuck configured to receive one of a calibration wafer and a production wafer.

72. [Previously Presented] The wafer processing apparatus according to claim 71 wherein the wafer holder includes vacuum chambers adapted to receive a vacuum to couple one of the calibration wafer and the production wafer with the chuck.

73. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer holder comprises an intermediate member adapted to couple with a chuck.

74. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer holder includes a vacuum chamber adapted to receive a vacuum to couple a received wafer with the wafer holder.

75. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the electrical coupling of the wafer holder comprises a conductive column configured to extend outward from plural surfaces of the wafer holder.

76. [Previously Presented] The wafer processing apparatus according to claim 75 further comprising a contact plate including circuitry configured to provide electrical connection with the conductive column.

77. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the electrical coupling of the wafer holder is adapted to contact the electrical coupling of the wafer.

78. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer holder is adapted to expose the wafer to a processing environment to process the wafer.

79. [Currently Amended] A wafer processing apparatus comprising:  
a wafer holder having circuitry configured to communicate a process signal from a received wafer and the process signal containing information regarding processing of the wafer during fabrication of integrated circuitry of the received wafer using the wafer processing apparatus.

80. [Currently Amended] The wafer processing apparatus according to claim 79 wherein the wafer holder is adapted to expose the wafer to a processing environment to process fabricate the integrated circuitry of the wafer.

81. [Previously Presented] A wafer processing apparatus comprising:  
a chuck including a surface, an electrical coupling adjacent the surface, and an electrical interconnect configured to connect with the electrical coupling of the chuck and conduct a signal within the chuck;  
an intermediate member adapted to receive a wafer and the intermediate member having a first surface and a second surface and the intermediate member including:  
an electrical coupling adjacent the first surface and configured to couple with the electrical coupling of the chuck;  
an electrical coupling adjacent the second surface; and  
an electrical interconnect configured to connect the electrical coupling adjacent the first surface and the electrical coupling adjacent the second surface; and

a wafer configured to couple with the second surface of the intermediate member, the wafer including a sensor and an electrical coupling configured to provide electrical connection of the sensor with the electrical coupling of the second surface of the intermediate member.

82. [Previously Presented] The wafer processing apparatus according to claim 81 further comprising a data gathering device coupled with the electrical coupling of the chuck and configured to receive the signal.

83. [Previously Presented] The wafer processing apparatus according to claim 82 further comprising a contact plate configured to communicate the signal intermediate the chuck and the data gathering device.

84. [Previously Presented] The wafer processing apparatus according to claim 81 wherein the sensor comprises a resistance temperature device.

85. [Previously Presented] The wafer processing apparatus according to claim 81 wherein the wafer comprises a calibration wafer.

86. [Previously Presented] The wafer processing apparatus according to claim 81 wherein the electrical interconnect comprises a conductive column configured to extend outward from plural surfaces of the chuck.

87. [Previously Presented] The wafer processing apparatus according to claim 86 further comprising a contact plate including circuitry configured to provide electrical connection with electrical couplings of the chuck.

88. [Previously Presented] The wafer processing apparatus according to claim 81 wherein the intermediate member is configured to expose the wafer to a processing environment to process the wafer.

89. [Previously Presented] A wafer processing apparatus comprising:  
a chuck including a surface, a plurality of electrical couplings adjacent the surface, and a plurality of electrical interconnects configured to connect with respective electrical couplings of the chuck and conduct signals within the chuck;  
an intermediate member adapted to receive a wafer and the intermediate member having a first surface and a second surface and the intermediate member including:  
a plurality of electrical couplings adjacent the first surface and configured to couple with respective electrical couplings of the chuck;  
a plurality of electrical couplings adjacent the second surface; and

a plurality of electrical interconnects configured to electrically connect the electrical couplings of the first surface with respective electrical couplings of the second surface;

a calibration wafer configured to couple with the second surface of the intermediate member, the calibration wafer including a plurality of resistance temperature devices configured to generate process signals, and a plurality of electrical connections configured to electrically connect the resistance temperature devices with respective electrical couplings of the second surface of the intermediate member; and

a data gathering device coupled with the electrical interconnects of the chuck and configured to receive the process signals from the resistance temperature devices through the intermediate member and the chuck.

90. [Previously Presented] The wafer processing apparatus according to claim 89 wherein the intermediate member is configured to expose the wafer to a processing environment to process the wafer.

91. [Previously Presented] An electronic device workpiece processing apparatus comprising:

a workpiece holder adapted to receive an electronic device workpiece having an electrical coupling, the workpiece holder including an electrical coupling configured to electrically couple with the electrical coupling of the electronic device workpiece and

communicate signals between the electronic device workpiece and the workpiece holder during fabrication of integrated circuitry of the electronic device workpiece using the electronic device workpiece processing apparatus, wherein the workpiece holder includes a vacuum chamber adapted to receive a vacuum to couple a received electronic device workpiece with the workpiece holder.

92. [Previously Presented] The apparatus of claim 91 wherein the workpiece holder is configured to expose the electronic device workpiece to a processing environment to process the electronic device workpiece.

93. [Previously Presented] An electronic device workpiece processing apparatus comprising:

a workpiece holder adapted to receive an electronic device workpiece having an electrical coupling, the workpiece holder including an electrical coupling configured to electrically couple with the electrical coupling of the electronic device workpiece and communicate signals between the electronic device workpiece and the workpiece holder, wherein the electrical coupling of the workpiece holder is configured to extend outward from plural surfaces of the workpiece holder; and

a contact plate including circuitry configured to provide electrical connection with the conductive column.

94. [Previously Presented] The apparatus of claim 93 wherein the workpiece holder is configured to expose the electronic device workpiece to a processing environment to process the electronic device workpiece.

95. [Previously Presented] An electronic device workpiece processing apparatus comprising:

a chuck including a surface, an electrical coupling adjacent the surface, and electrical interconnect configured to connect with the electrical coupling of the chuck and conduct a signal within the chuck;

an intermediate member having a first surface and a second surface and the intermediate member including:

an electrical coupling adjacent the first surface and configured to couple with the electrical coupling of the chuck;

an electrical coupling adjacent the second surface; and

an electrical interconnect configured to connect the electrical coupling adjacent the first surface and the electrical coupling adjacent the second surface;

an electronic device workpiece configured to couple with the second surface of the intermediate member, the electronic device workpiece including a sensor and an electrical coupling configured to provide electrical connection of the sensor with the electrical coupling of the second surface of the intermediate member;

a data gathering device coupled with the electrical coupling of the chuck and configured to receive the signal; and

a contact plate configured to communicate the signal intermediate the chuck and the data gathering device.

96. [Previously Presented] The apparatus of claim 95 wherein the intermediate member is configured to expose the electronic device workpiece to a processing environment to process the electronic device workpiece.

97. [Previously Presented] An electronic device workpiece processing apparatus comprising:

a chuck including a surface, an electrical coupling adjacent the surface, and electrical interconnect configured to connect with the electrical coupling of the chuck and conduct a signal within the chuck;

an intermediate member having a first surface and a second surface and the intermediate member including:

an electrical coupling adjacent the first surface and configured to couple with the electrical coupling of the chuck;

an electrical coupling adjacent the second surface; and

an electrical interconnect configured to connect the electrical coupling adjacent the first surface and the electrical coupling adjacent the second surface; and

an electronic device workpiece configured to couple with the second surface of the intermediate member, the electronic device workpiece including a sensor comprising a resistance temperature device, and an electrical coupling configured to provide electrical connection of the sensor with the electrical coupling of the second surface of the intermediate member.

98. [Previously Presented] The apparatus of claim 97 wherein the intermediate member is configured to expose the electronic device workpiece to a processing environment to process the electronic device workpiece.

99. [Previously Presented] An electronic device workpiece processing apparatus comprising:

a chuck including a surface, an electrical coupling adjacent the surface, and electrical interconnect configured to connect with the electrical coupling of the chuck and conduct a signal within the chuck;

a contact plate including circuitry configured to provide electrical connection with the electrical coupling of the chuck;

an intermediate member having a first surface and a second surface and the intermediate member including:

an electrical coupling adjacent the first surface and configured to couple with the electrical coupling of the chuck;

an electrical coupling adjacent the second surface; and

an electrical interconnect configured to connect the electrical coupling adjacent the first surface and the electrical coupling adjacent the second surface, wherein the electrical interconnect comprises a conductive column configured to extend outward from plural surfaces of the chuck; and

an electronic device workpiece configured to couple with the second surface of the intermediate member, the electronic device workpiece including a sensor and an electrical coupling configured to provide electrical connection of the sensor with the electrical coupling of the second surface of the intermediate member.

100. [Previously Presented] The apparatus of claim 99 wherein the intermediate member is adapted to expose the electronic device workpiece to a processing environment to process the electronic device workpiece.

101. [Previously Presented] An electronic device workpiece processing apparatus comprising:

an electronic device workpiece including a sensor and an electrical coupling; and  
an intermediate member including a surface having an electrical coupling and adapted to expose the electronic device workpiece to a processing environment to process the electronic device workpiece;

wherein the electrical coupling of the electronic device workpiece is configured to provide electrical connection of the sensor with the electrical coupling of the surface of the intermediate member.

102. [Previously Presented] The apparatus according to claim 101 wherein the electronic device workpiece comprises a wafer.

103. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer holder is configured to support a wafer for processing within the wafer processing apparatus to form a plurality of discrete integrated circuits of a plurality of respective dies to be singulated from the wafer at a subsequent moment in time.

104. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer holder is configured to expose a wafer to a processing environment within the wafer processing apparatus to form a plurality of discrete integrated circuits of a plurality of respective dies to be singulated from the wafer at a subsequent moment in time.

105. [Previously Presented] The wafer processing apparatus according to claim 64 further comprising a processing area of the wafer processing apparatus configured to process a wafer supported using the wafer holder to fabricate a plurality of discrete integrated circuits of a plurality of respective dies to be singulated from the wafer at a subsequent moment in time.

106. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer processing apparatus is configured to process a wafer supported using the wafer holder to fabricate a plurality of discrete integrated circuits of a plurality of respective dies to be singulated from the wafer at a subsequent moment in time.

107. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the wafer comprises a semiconductive wafer comprising a plurality of integrated circuit dies prior to singulation of at least one of the dies at a subsequent moment in time.

108. [Currently Amended] An article of manufacture comprising:  
a wafer processing apparatus configured to fabricate integrated circuitry using a plurality of wafers and comprising a wafer holder configured to receive at least one of the wafers having an electrical coupling, and wherein the wafer holder comprises an electrical coupling configured to electrically couple with the electrical coupling of the at least one wafer and to communicate signals between the at least one wafer and the wafer holder during fabrication of the integrated circuitry of the at least one wafer using the wafer processing apparatus.

109. [Previously Presented] The article of claim 108 wherein the electrical coupling of the wafer holder is configured to contact the electrical coupling of the wafer.

110. [Previously Presented] The article of claim 108 wherein the communicated signals comprise information regarding processing of the wafer using the wafer processing apparatus.

111. [Previously Presented] An electronic device workpiece processing apparatus comprising:

an intermediate member comprising a first surface and a second surface, wherein the second surface comprises an electrical coupling; and

an electronic device workpiece including a sensor and an electrical coupling configured to provide electrical connection of the sensor with the electrical coupling of the second surface of the intermediate member.

112. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the electrical coupling of the wafer holder is electrically conductive to establish an electrical connection with the electrical coupling of the wafer wherein electrons of the signals are exchanged between the electrical couplings of the wafer holder and the wafer.

113. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the signals are generated using electrical circuitry of the wafer.

114. [Previously Presented] The wafer processing apparatus according to claim 64 wherein the signals comprise electrical signals.

115. [Currently Amended] The wafer processing apparatus according to claim 79 wherein the process signal comprises information regarding the processing of the wafer for the fabrication of integrated circuitry using the wafer processing apparatus.

116. [Previously Presented] The wafer processing apparatus according to claim 79 wherein the wafer holder is configured to receive the process signal comprising an electrical signal using an electrical coupling of the wafer holder in electrical contact with an electrical coupling of the wafer.

117. [Previously Presented] The electronic device workpiece processing apparatus according to claim 91 wherein the communicated signals comprise information regarding processing of the wafer for fabrication of the integrated circuitry using the wafer processing apparatus.

118. [Previously Presented] The electronic device workpiece processing apparatus according to claim 91 wherein the communicated signals comprise electrical signals.

119. [Currently Amended] The article according to claim 108 wherein the communicated signals comprise information regarding processing of the wafers for the fabrication of the integrated circuitry using the wafer processing apparatus.

120. [Previously Presented] The article according to claim 108 wherein the electrically coupled electrical couplings of the wafer and the wafer holder are in electrical contact with one another to communicate the signals comprising electrical signals between the at least one wafer and the wafer holder.

121. [New] The electronic device workpiece processing apparatus according to claim 91 wherein the electrical coupling of the workpiece holder is configured to communicate the signals of a sensor of the electronic device workpiece.

122. [New] The electronic device workpiece processing apparatus according to claim 91 wherein the workpiece holder comprises a chuck.

123. [New] The electronic device workpiece processing apparatus according to claim 91 wherein the workpiece holder comprises an intermediate member.